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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,572	09/12/2003	Makoto Sasaki	117128	5285
25944 7590 01/31/2008 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
			EXAMINER KAU, STEVEN Y	
			ART UNIT 2625	PAPER NUMBER
			MAIL DATE 01/31/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/660,572

Applicant(s)

SASAKI, MAKOTO

Examiner

Steven Kau

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/12/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on September 19, 2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings are objected to because of inconsistency of color designation between Figure 4 and Figure 6. For instance, white background dot is used for both Representative Color and Target Color in Figure 4, and white background and background with multiple strike-lines for Representative Color and Target Color, respectively in Figure 6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date

of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 8-10 and 17-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Kojima et al (Kojima) (US 6,917,704).

Regarding claim 20.

Kojima discloses a color processing method for adjusting colors of a specific region (Figs & 4, col 4, lines 20-45), which is a subject of the adjustment in a color image (col 4, lines 20-45), the color processing method comprising: calculating a color adjustment distance (col 2, lines 54-65), which is a distance (Euclidean distance) on a color space (RGB color space of Fig. 14) between a representative color representing the specific region in the color image (a small region of a picture element at coordinates (0, 0), col 4, lines 66 through col 5, line 5 & col 11, lines 33-40) and a target color (col 5, lines 64 through col 6, line 2), which is target of the adjustment, on the basis of the representative color and the target color (col 11, lines 33 through col 12, line 36); and

deciding (calculating) a reproduction color (average color between representative color and target color, col 3, lines 27-37) expressing the representative color of the specific region after the adjustment on the basis of the color adjustment distance, wherein the reproduction color is located between the representative color and the target color (Kojima discloses embodiments for determining a reproduction color by calculating the average color between representative color and target color. Since target color is set at the maximum and the reproduction color is the average color from the calculation, "displayed-color deriving means for deriving the color data of the displayed image by combining the plural representative colors", a person of ordinary skill in the art understands that the reproduction color is in between the representative color and the target color; Fig. 1, col 4, lines 38-65).

Regarding claims 1, 10 and 19.

Claims 1, 10 and 19 recite identical features as claim 20, except claim 1 is a method claim, claim 10 is an apparatus claim, and claim 19 is a computer program storage medium claim. Thus, arguments similar to that presented above for claim 20 are also equally applicable to claims 1, 10 and 19.

Regarding claim 17.

Kojima discloses wherein the target color is a color having the same color component ratio as that of the representative color ("the variance of respective basic – color data corresponding to the picture elements is calculated (Step S103). At this time, the simple method of calculating the variance is to accumulate all absolute values of the difference between the average and the color data of respective picture elements. And

the color having the maximum of variance is detected, and determined as a target color." A person of ordinary skill of the art understands target color is having the same color component ratio as that of the representative color. col 4, lines 38-55).

Regarding claim 18.

Kojima discloses a color adjustment unit (e.g. Representative Color extracting Circuit of Fig. 2) for adjusting the colors of the specific region toward the reproduction color (col 6, lines 51 through col 7, line 61).

Regarding claim 8.

Claim 8 recites identical features as claim 17, except claim 8 is a method claim. Thus, arguments similar to that presented above for claim 17 are also equally applicable to claim 8.

Regarding claim 9.

The structure elements of method claim 1 perform all steps of claim 9. Thus claim 9 is rejected under 103(a) for the same reason discussed in the rejection of claim

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al (Kojima) (US 6,917,704) in view of Caruthers et al (Caruthers) (US 6,575,096).

Regarding claim 16.

Kojima discloses wherein the target color is one of a given color (e.g. from a region of a picture element), a color selected from a plurality of colors (col 4, lines 20-65).

Kojima does not expressly teach that the target color is a color having a predetermined color component ratio.

Caruthers teaches that the target color is a color having a predetermined color component ratio (col 14, lines 26-36 and line 64 through col 15, line 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include the target color is a color having a predetermined color component ratio taught by Caruthers to improve printed color and as an example, to produce significantly less glossy than paper used in the Pantone.RTM (col 14, lines 64 through col 15, line 3).

Regarding claim 7.

Claim 7 recites identical features as claim 16, except claim 7 is a method claim. Thus, arguments similar to that presented above for claim 16 are also equally applicable to claim 7.

7. Claims 2, 3, 6, 11, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al (Kojima) (US 6,917,704) in view of Hiratsuka et al (Hiratsuka) (US 6,108,441).

Regarding claim 11.

Kojima discloses a color processing apparatus for adjusting colors of a specific region (Figs & 4, col 4, lines 20-45), which is a subject of the adjustment in a color image (col 4, lines 20-45), the color processing apparatus comprising: a color adjustment distance calculation section (Fig. 1) for calculating a color adjustment distance (col 4, lines 38-65), which is a distance on a color space (RGB color space of Fig. 14) between a representative color representing the specific region in the color image (a small region of a picture element at coordinates (0, 0), col 4, lines 66 through col 5, line 5 & col 11, lines 33-40) and a target color (col 5, lines 64 through col 6, line 2), which is target of the adjustment, on the basis of the representative color and the target color (col 11, lines 33 through col 12, line 36).

Kojima differs from claim 11, in that he does not expressly teach a reproduction distance coefficient calculation unit for calculating a reproduction distance coefficient, which is used to calculate a reproduction color expressing the representative color of the specific region after color adjustment; and a reproduction color calculation unit for calculating the reproduction color on the basis of the reproduction distance coefficient.

Hiratsuka teaches a reproduction distance coefficient calculation unit (Fig. 1 & 2) for calculating a reproduction distance coefficient (e.g. luminosity, chroma and hue parameters), which is used to calculate a reproduction color expressing the

representative color of the specific region after color adjustment (col 11, lines 11-22 & col 13, lines 10-30); and a reproduction color calculation unit for calculating the reproduction color on the basis of the reproduction distance coefficient (Figs. 1 & 2, col 11, lines 11-22 & col 13, lines 10-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include a reproduction distance coefficient calculation unit for calculating a reproduction distance coefficient, which is used to calculate a reproduction color expressing the representative color of the specific region after color adjustment; and a reproduction color calculation unit for calculating the reproduction color on the basis of the reproduction distance coefficient taught by Hiratsuka because color adjustment involves many parameters, such as luminosity parameter, chroma parameter and hue parameter, and these color distance coefficient are used to improve color adjustment process in high speed and high accuracy (col 10, lines 62 through col 11, line 6).

Regarding claim 2.

Kojima discloses the calculation of the reproduction color, and the reproduction color is calculated on the basis of the color adjustment distance (col 11, lines 33-40).

Kojima does not expressly teach calculating a reproduction distance coefficient, which is used to calculate the reproduction color, wherein: the reproduction distance coefficient.

Hiratsuka teaches calculating a reproduction distance coefficient, which is used to calculate the reproduction color, wherein: the reproduction distance coefficient (col 11, lines 11-22 & col 13, lines 10-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include calculating a reproduction distance coefficient, which is used to calculate the reproduction color, wherein: the reproduction distance coefficient taught by Hiratsuka because color adjustment involves many parameters, such as luminosity parameter, chroma parameter and hue parameter, and these color distance coefficient are used to improve color adjustment process in high speed and high accuracy (col 10, lines 62 through col 11, line 6).

Regarding claim 3.

Kojima discloses calculating a brightness adjustment coefficient, which is used to adjust brightness of the reproduction color, on the basis of the representative color, in the calculation of the reproduction color, the reproduction color is calculated on the basis of the color adjustment distance and the brightness adjustment coefficient (col 13, lines 33-65).

Kojima differs from claim 3, in that he does not expressly teach that the reproduction color is calculated on the basis of the reproduction distance coefficient.

Hiratsuka teaches that the reproduction color is calculated on the basis of the reproduction distance coefficient (col 11, lines 11-22 & col 13, lines 10-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include that the reproduction color is

calculated on the basis of the reproduction distance coefficient taught by Hiratsuka because color adjustment involves many parameters, such as luminosity parameter, chroma parameter and hue parameter, and these color distance coefficient are used to improve color adjustment process in high speed and high accuracy (col 10, lines 62 through col 11, line 6).

Regarding claim 12.

The structure elements of apparatus claim 11 perform all steps of claim 12. Thus claim 12 is rejected under 103(a) for the same reason discussed in the rejection of claim 11.

Regarding claim 15.

The structure elements of apparatus claim 11 perform all steps of claim 15. Thus claim 15 is rejected under 103(a) for the same reason discussed in the rejection of claim 11.

Regarding claim 6.

Claim 6 recites identical features as claim 15, except claim 6 is a method claim. Thus, arguments similar to that presented above for claim 15 are also equally applicable to claim 6.

8. Claims 13 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al (Kojima) (US 6,917,704) in view of Hiratsuka et al (Hiratsuka) (US 6,108,441) as applied to claims 3 and 12 above, and further in view of Kim et al (Kim) (US 2002/0090133).

Regarding claim 13.

Kojima discloses wherein the brightness adjustment coefficient calculation unit (Figs. 2-9) calculates the brightness adjustment coefficient on the basis of at least one of brightness (col 13, lines 33-65).

Kojima differs from claim 13, in that he does not teach color saturation and hue of the representative color.

Kim teaches that color saturation and hue of the representative color (Figs. 1 & 2, Para. 0032).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include color saturation and hue of the representative color taught by Kim to precisely measure in a color space and to overcome color adjustment problems such as used to separate an object included in an image from background of the image is that if two pixels of the same hue in an area of an object have different brightness and saturation components, they are treated as different color image (Paras 0005 and 0010).

Regarding claim 4.

Claim 4 recites identical features as claim 13, except claim 4 is a method claim. Thus, arguments similar to that presented above for claim 13 are also equally applicable to claim 4.

9. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al (Kojima) (US 6,917,704) in view of Hiratsuka et al (Hiratsuka) (US

6,108,441) as applied to claims 3 and 12 above, and further in view of Matsugu (US 2002/0044691).

Regarding claim 14.

Kojima discloses a differentiable and continuous function of the color adjustment distance (Fig. 5, col 8, lines 54-60 & col 11, lines 26-50).

Kojima does not expressly teach wherein the reproduction distance coefficient calculation unit calculates the reproduction distance coefficient in accordance with one of a monotone decreasing function of the color adjustment distance.

Matsugu teaches wherein the reproduction distance coefficient calculation unit calculates the reproduction distance coefficient in accordance with one of a monotone decreasing function of the color adjustment distance (Paras 0413 & 0423).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include the reproduction distance coefficient calculation unit calculates the reproduction distance coefficient in accordance with one of a monotone decreasing function of the color adjustment distance taught by Matsugu to control coefficient parameters such as luminance, variation amount of gains and gamma characteristics, etc. Para 0412 & 0413).

Regarding claim 5.

Claim 5 recites identical features as claim 14, except claim 5 is a method claim. Thus, arguments similar to that presented above for claim 14 are also equally applicable to claim 5.

Conclusion

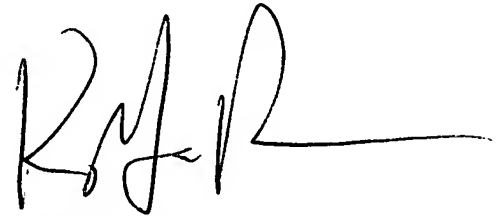
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kau whose telephone number is 571-270-1120 and fax number is 571-270-2120. The examiner can normally be reached on M-F, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Kau
Patent Examiner
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January 16, 2008



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